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Letter from the Directors:

Richard D. Waskiewicz, M. S., Division of Food and Drugs, Food Protection Program
Howard S. Wensley, M.S., C.H.O., Division of Community Sanitation

Foodborne illness surveillance and control have been in the national spotlight. This spotlight has been focused in two directions: first, the national media has devoted air time and print to the series of foodborne illness outbreaks that have occurred throughout the United States, and, second, the Clinton Administration has proposed an ambitious, $43-million Food Safety Initiative that, if fully funded by Congress, is designed to reduce the incidence of foodborne illness by strengthening and improving food safety practices and policies. The initiative includes expanded education efforts aimed at consumers, food service workers, and various other segments of the food community; enhanced food safety inspection and monitoring efforts; an increase in research to develop new and more rapid methods to detect foodborne pathogens and to develop preventive techniques; and improved intergovernment communications and coordination of response to foodborne outbreaks, as well as expansion of the nationwide FoodNet system,which gathers data on the occurrence of foodborne illnesses. The Division of Food and Drugs' Food Protection Program (FPP) and the Division of Communicable Disease Control will continue working on many of these efforts, and look forward to involvement on the national level.

Within Massachusetts, the variety of pathogens causing illness and the foods harboring the pathogens continues to grow. No longer are the standard laboratory tests and environmental investigations sufficient to detect and control the diseases. Also, no longer is an outbreak confined to a particular eating establishment or food processing operation, as evidenced by the 1997 experience with frozen and fresh berries. In March 1997, the alarm was sounded in Michigan as school children became ill with hepatitis A. The source of the disease was traced back to frozen strawberries that were purchased as part as the U. S. Department of Agriculture's surplus food program, and which were processed and packaged in California and distributed throughout the United States.

A few months later, fresh raspberries were implicated for the second consecutive year as the source of the foodborne parasitic infection, cyclospora. During the 1997 nationwide outbreak, there were more than 1500 recorded cases of cyclospora, with 90 sporadic cases and six cluster outbreaks recorded in Massachusetts.

During the summer months, the Division was involved with two recalls involving two popular ethnic products: hummus, a chick pea dip and baba ganoush, an eggplant dip. The product recalls were the result of the bacteria Listeria monocytogenes being detected separately in the products of a New Hampshire-based firm and a Massachusetts-based firm. Listeriosis has limited effects on healthy individuals, but can be extremely virulent for the very young, elderly, immuno-compromised, and especially among pregnant women who risk the possibility of miscarriage.

HACCP (Hazard Analysis Critical Control Point) is one of the focus areas for the FPP. With the December 18, 1997 deadline approaching for compliance with the new federal Seafood HACCP regulation, both industry representatives as well as regulators have become certified in Seafood HACCP regulations. The series of Seafood HACCP courses, which the Division staff participated and assisted in organizing, have attracted participants from almost 200 shellfish businesses throughout the State as well as the regulatory community. Also staff from the FPP continue to assist in the organization and training in additional sessions each month.

A separate two-day Seafood HACCP Program for Regulators was attended by more than 20 state and federal regulators, including 10 FPP staff. At the end of the course, in order to be certified, each participant was required to complete a rigorous written examination.

With the increased number of industry personnel and regulators trained in Seafood HACCP, this concept of inspection is designed to increase seafood safety throughout the entire United States.

In meetings held throughout the U.S., the federal Food and .Drug Administration(FDA) invited representatives from industry, academia, and government to discuss retail food protection program standards. Staff from the FPP participated in the Northeast meeting where topics included review, re-examination, and comment on the methods and procedures of inspecting retail food establishments, improving methods in foodborne illness investigations, principles of HACCP, regulation as well as manpower and finance.

In Spring 1997, Sean Bowen and Michael Wall joined the food inspection staff. Sean, who has a Bachelor's degree in aquaculture and has spent time in private industry, is working in the shellfish unit, where he has completed the Interstate Shellfish Shippers course and is standardized as a Shellfish Inspector. Michael, with an Associate's degree in Food Science and former intern in the FPP, is presently sharing duties between the Dairy Plant Inspection and the Food Processing Units. Since joining the FPP, both Sean and Michael have completed the Seafood HACCP certification program.

Other changes within the Division include the transfer of Linda Sperandio to a state employee and the retirement of Elizabeth Bourque, Ph.D. who was the primary overseer of bottled water activities. Her expertise in toxicology and bottled water testing requirements will be missed. Finally, Priscilla Luongo is now Priscilla Neves.

During the last year, a series of amendment were adopted in the Housing Code (105 CMR 410.000 *Minimum Standards of Fitness for Human Habitation [Chapter II] State Sanitary Code*), Chapter II. Amendments include changes in common hallway lighting requirements, locking devices (to avoid entrapment within a building), and owner responsibility to maintain walls and floors in a clean and sanitary condition in shared bathrooms. They also bring the requirements for handrails and guardrails into compliance with the State Building Code and will permit variances for certain historic buildings.

At present, the regulations for recreational camps for children (105 CMR 430.000 *Minimum Sanitation and Safety Standards for Recreational Camps for Children*) and bathing beach water quality (105 CMR 445.000 *Minimum Standards for Bathing Beaches*) are undergoing review and revision. The proposed amendments include limiting the dates of operation; requiring additional employment standards for staff and volunteers; mandating reporting abuse and neglect, and updating immunization requirements.

The proposed beach amendments will establish a new indicator organism and establish testing parameters to include frequency of testing and testing locations.

The Division of Community Sanitation is interested in hearing from you in regard to your training needs pertaining to the areas for which it is responsible. In addition to classroom training, we are interested in conducting one-on-one field training for those who request it.

Outbreaks of *Escherichia coli* O157:H7 Infection and Cryptosporidiosis Associated with Drinking Unpasteurized Apple Cider
Connecticut and New York, October 1996

Reprinted from CDC, MMWR 1997 46:4-8.

In October 1996, unpasteurized apple cider or juice was associated with three outbreaks of gastrointestinal illness. In the Western United States, an outbreak of *Escherichia coli* O157:H7 infections associated with unpasteurized commercial apple juice caused illness in 66 persons and one death (1). In addition, one outbreak of apple cider-related *E. coli* O157:H7 infections and another of cider-related *Cryptosporidium parvum* infections occurred in the Northeast. Apple cider is a traditional beverage produced and consumed in the fall. Cider often is manufactured locally at small cider mills where apples are crushed in presses, and the cider frequently is not pasteurized before sale. This report summarizes the clinical and epidemiologic features of the two apple cider-related outbreaks, which suggest that current practices for producing apple cider may not be adequate to prevent microbial contamination.

Connecticut

On October 11, the Connecticut Department of Public Health (DPH) was notified by staff of the Connecticut site of CDC's Foodborne Diseases Active Surveillance Network of four reported cases of *E. coli* O157:H7 infection in residents of New Haven County (1995 population: 794,785). An investigation of this cluster was initiated by DPH. A case was defined as onset of diarrhea (i.e., three or more loose stools per day) during October 1-11 in a Connecticut resident and laboratory-confirmed infection with *E. coli O*157:H7. Additional case-finding was conducted by notifying all Connecticut clinical laboratories of a possible outbreak of *E. coli* O157:H7 infection and requesting that cases be reported immediately to DPH. As a result of active case-finding, DPH initially identified eight cases with onset during October 3-11.

Of the eight case-patients, six were female, and ages of all eight ranged from 2 to 73 years (mean: 25 years). Case-patients resided in six towns within New Haven County. Manifestations included bloody diarrhea and abdominal pain (eight patients), vomiting (five), and fever (four). Duration of illness ranged from 3 to 11 days (median: 7 days). Five patients were hospitalized, including one with hemolytic uremic syndrome (HUS) and one with thrombotic thrombocytopenic purpura.

On October 17, DPH conducted a matched case-control study to determine probable sources for the outbreak. Controls were selected from telephone-exchange lists and were matched to cases by sex, town of residence, and age group. Controls reported no diarrhea during the 20-day period beginning 10 days before illness onset in their matched cases. Case-patients were asked about food consumption during the 7 days preceding illness, and controls were asked about consumption during the same 7 days as their matched cases. Based on interviews with the first eight case-patients and 21 controls, increased risk for illness was associated with drinking fresh apple cider during the 7 days preceding onset of illness (matched odds ratio [OR]=12.0; 95% confidence interval [CI]=1.3-111.3; $p<0.01$). Specifically, illness was associated with drinking brand A cider (matched OR=undefined; 95% CI=3.5-infinity; $p<0.01$). No other food item (including ground beef, unpasteurized milk, or lettuce) or common event was significantly associted with increased risk for illness. Of the eight patients, seven reported drinking brand A cider during the 7 days preceding illness.

After completion of the case-control study, six additional patients were identified; of these, four had culture-confirmed infection, and two had been hospitalized with HUS but did not have culture-confirmed *E. coli* O157:H7 infection. All six had a history of drinking brand A cider. Ten of the 12 outbreak-associated isolates of *E. coli* O157:H7 were sent to CDC for pulse-field gel electrophoresis typing; all 10 were determined to be closely related.

On October 18, DPH and the Connecticut Department of Consumer Protection (DCP) advised Connecticut residents to discard or boil before drinking all brand A cider purchased since the beginning of the cider season in September. DCP coordinated a recall of brand A cider from all retail outlets. Approximately 9000 gallons of the cider had been distributed throughout Connecticut and three neighboring states. DCP and the regional office of the Food and Drug Administration (FDA) notified regulatory agency and state health department personnel in the three neighboring states of the recall.

Brand A cider was pressed at a mill in a residential area from apples purchased from multiple sources. Some of the apples used were "drop" apples (i.e., apples picked up from the ground). All apples were brushed and washed in potable municipal water in a flow-through wash system before pressing in a wooden press. Potassium sorbate 0.1% was added as a preservative; the cider was not pasteurized.

Brand A cider was pressed in a mill in a residential area from apples purchased from multiple sources. Some of the apples used were “drop” apples (i.e., apples picked up from the ground). All apples were brushed and washed in potable municipal water in a flow-through wash system before pressing in a wooden press. Potassium sorbate 0.1% was added as a preservative; the cider was not pasteurized.

New York

During October 10-15, a local hospital laboratory notified the Cortland County Health Department (CCHD) about 10 cases of laboratory-confirmed cryptosporidiosis with recent onset among county residents (1990 population: 48,963). During the same period in 1995, one case of cryptosporidiosis was reported to CCHD. All case-patients had onset of symptoms during September 28-October 10 and reported drinking apple cider produced at a local cider mill (mill A). CCHD, the New York State Department of Health (NYSDOH), and the New York State Department of Agriculture and Markets NYS A&M) initiated an investigation of this cluster.

A confirmed case was defined as onset of diarrhea during September 28-October 19 in a Cortland County resident and laboratory evidence of *Cryptosporidium* in a stool specimen. A suspected case was defined as onset of diarrhea during the outbreak period in a household member of a person with confirmed cryptosporidiosis. CCHD conducted active surveillance for additional cases by contacting area clinicians, hospitals, and laboratories.

A total of 20 confirmed and 11 suspected cases were identified from 19 households. The median age was 27 years (range: 1-62 years), and 17 were female. Symptoms included diarrhea (100%), abdominal cramping (55%), vomiting (39%), fever (36%), bloody diarrhea (10%). The median duration of symptoms was 6 days (range: 1-21 days).

CHD and NYSDOH conducted a matched case-control study to assess probable sources of the outbreak. One neighborhood-matched control-household was :acted for each household with a laboratory-confirmed case. In each controls-household, an adult (age ≥18 years) member was asked about history of illness, where anyone in the household had drank apple cider since September 28, which brand of cider was

consumed, and the date the cider was purchased.

Eighteen case-households were included in the matched case-control study. A history of drinking cider from mill A was reported for at least one member of the households, compared with only one of the 18 control-households (matched OR=undefined, $p<0.01$). Specifically, cider pressed during September 28-29 (i.e., opening weekend) was associated with illness: 15 of 17 case-households in which the purchase date was known compared with none of the control-households reported drinking cider pressed on opening weekend (matched OR=undefined, $p<0.01$).

Mill A purchased all apples for cider pressing from one New York orchard. Local state health departments and NYS A&M inspected the cider mill and apple orchard. The owner of the orchard reported that only picked apples were sold to the cider mill, and drop apples were sold for use in processed or pasteurized foods. Before pressing, the mill washed and brushed the apples using water from a 45-foot drilled well; preservatives were not added to the cider. Although dairy livestock were not maintained by the orchard, the cider mill was located across the road from a dairy farm Testing of remaining cider samples from opening weekend, swabs of equipment surfaces, and water obtained on October 21 from the drilled well did not yield *Cryptosporidium*. However, coliform bacteria were detected in four water samples obtained the well, and *E. coli* was detected in one sample.

Reported by: PA Mshar, ZF Dembek, PhD, ML Cartter, MD, JL Hadler, MD, State Epidemiologist, Connecticut Dept of Public Health; TR Fiorentino, MPH, RA Marcus, MPH, School of Medicine Yale Univ, New Haven; J McGuire, MA Shiffrin, Connecticut Dept of Consumer Protection. A Lewis, J Feuss, J Van Dyke, Cortland County Dept of Health; M Toly, M Cambridge, J Guzewich, J Keithly, PhD, D Dziewulski, PhD, E Braun-Howland, PhD, D Ackman, MD, P Smith, MD, State Epidemiologist, New York State Dept of Health; J Coates, J Ferrara, New York State Dept of Agriculture and Markets. Foodborne and Diarrheal Diseases Br, Div of Bacterial and Mycotic Diseases, and Div of Parasitic Diseases, National Center for Infectious Diseases; State Br, Div of Applied Public Health and Training (proposed), Epidemiology Program Office, CDC.

Editorial Note: Unpasteurized apple cider and juice have been associated with outbreaks of *E. coli* O157:H7 infection, cryptosporidiosis, and salmonellosis (1-4).
Animals are the primary reservoir for the pathogenic organisms associated with these outbreaks. In particular, cattle, deer, and sheep can asymptomatically carry *E. coli* O157:H7 and *Cryptosporidium,* and many animals, including cattle, chickens, and pigs, can asymptomatically carry *Salmonella.* Although the exact mechanisms of contamination for these previous outbreaks were not clearly determined, in three of the outbreaks, manure was suspected to have contaminated the apples. For example, in an outbreak of cryptosporidiosis in 1993, drop apples were collected from trees adjacent to an area grazed by cattle whose stool contained *Cryptosporidium (3),* and in a salmonellosis outbreak in 1974, drop apples had been collected from an orchard fertilized with manure (4). The practice of using drop apples for making apple cider is common (2), and apples can become contaminated by resting on ground contaminated with manure. In an outbreak of *E. coli* O157:H7 infections in 1991 (2), the cider press operator also raised cattle, and cattle grazed in a field adjacent to the mill. The presence of animals near a cider mill can result in manure inadvertently contacting apples, equipment, or workers' hands. In addition, apples can become contaminated if transported or stored in areas that contain manure, or if rinsed with contaminated water.

These previous outbreaks of illness prompted recommendations to reduce the risk for producing contaminated cider, including 1) preventing the introduction of animal manure into orchards, 2) avoiding use of

apples that have fallen to the ground, 3) washing and brushing apples before pressing, 4) using a preservative such as sodium benzoate, and 5) routine pasteurization *(3,5).* In the outbreaks in Connecticut and New York, some of these recommended production practices had been followed. For example, in Connecticut, apples were washed and brushed before pressing; however, drop apples were used. In New York, the mill reportedly did not use drop apples, and apples were washed and brushed before pressing; however, cattle were present near the farm, and the apples were washed with water from a source later determined to contain *E. coli* - an indicator of contamination with animal or human feces.

At least two factors complicate efforts to reduce the risk for transmission of enteric pathogens through unpasteurized apple cider and juice. First, a small number of pathogenic organisms can result in infection - ingestion of as few as 30 *Cryptosporidium (6)* and <1000 *E. coli* O157:H7 (7) have caused symptomatic infection in humans. Second, although apple cider and juice usually are acidic (pH of 3-4) *(5,8),* both *Cryptosporidium* and *E. coli* O157:H7 are acid-tolerant, and both organisms can survive in apple cider for up to 4 weeks *(3,5).* The addition of preservatives to apple cider containing *E. coli* O157:H7 does not consistently kill the organism *(5,8),* and *Cryptosporidium* oocysts are resistant to most common disinfectants (e.g., bleach, iodine, and sodium hydroxide) (9). Pasteurization and boiling kill *E. coli* O157:H7 and *Cryptosporidium,* and other methods that might increase the safety of cider are under investigation (*10).* FDA is evaluating information received at a public meeting held December 16-17, 1996, to determine methods to reduce the risk for illness associated with fresh juices. Until alternative effective methods are developed, consumers can reduce their risk for enteric infections by drinking pasteurized or boiled apple cider and juice.

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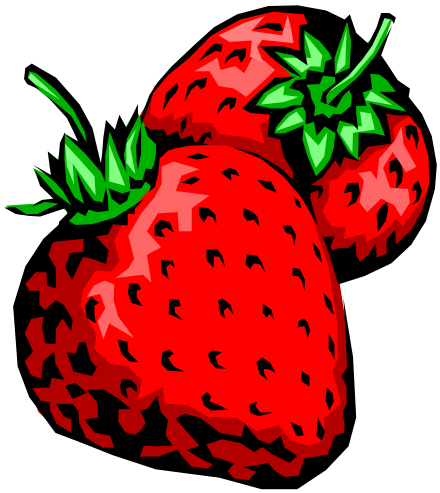
Hepatitis A from Strawberries: Who's to Blame?

Dean O. Cliver
Food Technology - June 1997



Last March, 153 cases of Hepatitis A occurred in Calhoun County, Michigan The source appeared to be frozen strawberries served as part of the school lunch program that were obtained via the United States Department of Agriculture's surplus food program. They were evidently grown in Mexico but processed and frozen in 30-lb. cans in San Diego, California.

Hepatitis A is a viral disease of the liver, transmitted by a fecal-oral cycle. Humans are the only hosts, except for a few other primate species that could not have figured in this outbreak. Thus, human fecal contamination, by way of either water (say, from flush toilets inadequately treated before discharge) or the feces-soiled hands of infected persons, is the source of the virus in food. There is no way to tell which was the source of contamination in this instance, nor where it happened.

Fortunately, hepatitis A tends to be relatively mild in children, though it can cause prolonged debility and even permanent liver damage, especially in adults. The incubation period from when the virus is first ingested until the onset of illness ranges from 15 to 50 days and averages four weeks. Illness often includes fever, digestive upset, and after a few days, jaundice. The infected person is likely to shed large quantities of the virus in feces during the last period, when illness is not seen or suspected. Outbreaks traced to a single infected food worker are fairly common.

The Centers for Disease Control and Prevention, in its most recent compilation period, 1988-1992, put hepatitis A as the fourth leading cause of foodborne disease. The Council on Agricultural Science and Technology in 1994 estimated that 4,800-35,000 foodborne cases of hepatitis A occur in the United States annually. The most common food vehicles are shellfish, such as clams and oysters, but other foods have also been implicated.

What may have been the first outbreak of hepatitis A associated with frozen strawberries was reported in 1965. Food-associated hepatitis outbreaks have been recorded anywhere that health authorities have looked for them. All are preventable, but not all are prevented. Although the origin of the strawberries is a hot political issue, the main concern with *these* strawberries having come from Mexico is that they were distributed through the USDA school lunch program and were, for that reason, required to have been grown in the United States. Of course, parents are outraged that their children were made ill by food served them through the school lunch program. However, it must be recognized that, when outbreaks are not occurring, USDA's

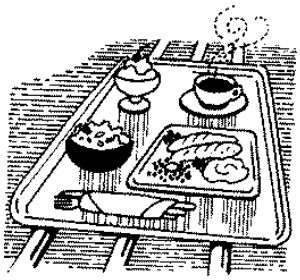
school lunch and surplus programs are regularly stigmatized and chronically underfunded. Furthermore, the incipient "national food safety initiative" is handicapped by years of neglect of the research needed to provide a science base.

Growing strawberries, and much other produce, is risky business. The fact that strawberries made such news on this occasion is testimony to how rarely things go wrong. Tightening rules (for whom?) and stepping up inspection (where?) will surely make them safer. The only identifiable culprit in this matter appears to be the manager who falsely certified that the berries had been grown in the United States. Although this has nothing to do with how they became contaminated, he will surely face heavy penalties because there is no one else to blame. This may help to deter future fraud, but it will not improve the safety of our food supply. Neither will testing batches of strawberries, either before or after an outbreak.

Possible HACCP-type measures include regular testing of water used for irrigation and processing, and immunizing food workers, from field to foodservice and retail, with hepatitis A vaccine if they are not already immune from a previous infection. The latter measure would not prevent transmission of other diseases via food, but it would stop hepatitis A. Alternatively, children could be immunized with hepatitis A vaccine early in life. The *means* are now at hand for such measures, but finding an agency or organization to pay for them remains a challenge.

And though I wouldn't want *my* children to get hepatitis A, from a school lunch or any other source, my 35 years of work in food safety tells me that a risk-free food supply is impossible, especially at a cost that most Americans can or will pay.

Dean O. Cliver, a Professional member of the Institute of Food Technologists, is Professor of Food Safety, School of Veterinary Medicine, University of California-Davis. His laboratory group is the World Health Organization's Collaborating Center for Food Virology. ❖



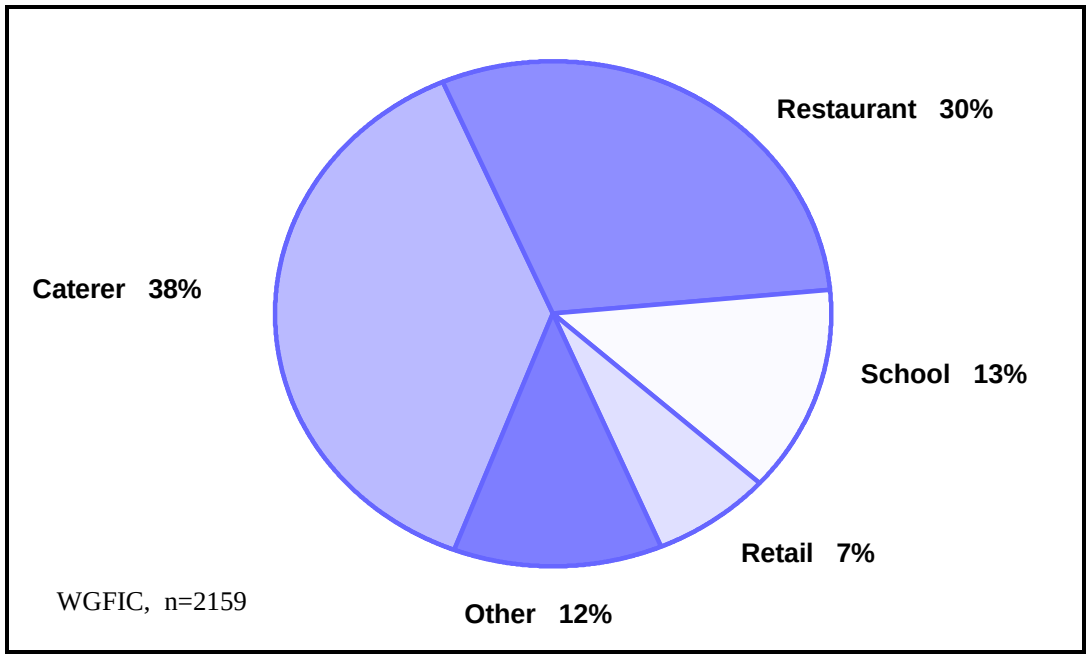
Foodborne Illness Investigations: 1996

Emily L. Harvey, R.S.
Division of Epidemiology
Working Group on Foodborne Illness Control

The following tables and charts summarize the Working Group on Foodborne Illness Control's (WGFIC) disease investigation efforts for the calendar year 1996. Once again, the large impact that catered events can have on foodborne illness is illustrated in the data. Only one percent of complaints received by the WGFIC were related to caterers or catered events, yet this one percent accounted for 38 percent of the total number of illness cases.

Cases of interests during the year included an outbreak of *Clostridium perfringens* at a college dining hall, which accounted for 155 cases of illness; and an outbreak of small, round-structured virus genetic type 1A gastroenteritis at a hotel-conference center which accounted for 691 cases of illness.
As a result of the nationwide Cyclospora outbreak, the WGFIC were able to identify four distinct clusters and multiple sporadic cases of cyclospora in Massachusetts. Most cases were linked to the consumption of fresh raspberries or mixed berry (including raspberries) food products. Food trace-back activities identified berries imported from Guatemala as the probable source.

During the year a new "epi info"-based foodborne illness database system was developed. This new system will provide more streamlined data collection, entry, and reporting mechanisms. ❖



Foodborne Illness Investigations and (Cases) Massachusetts: 1996

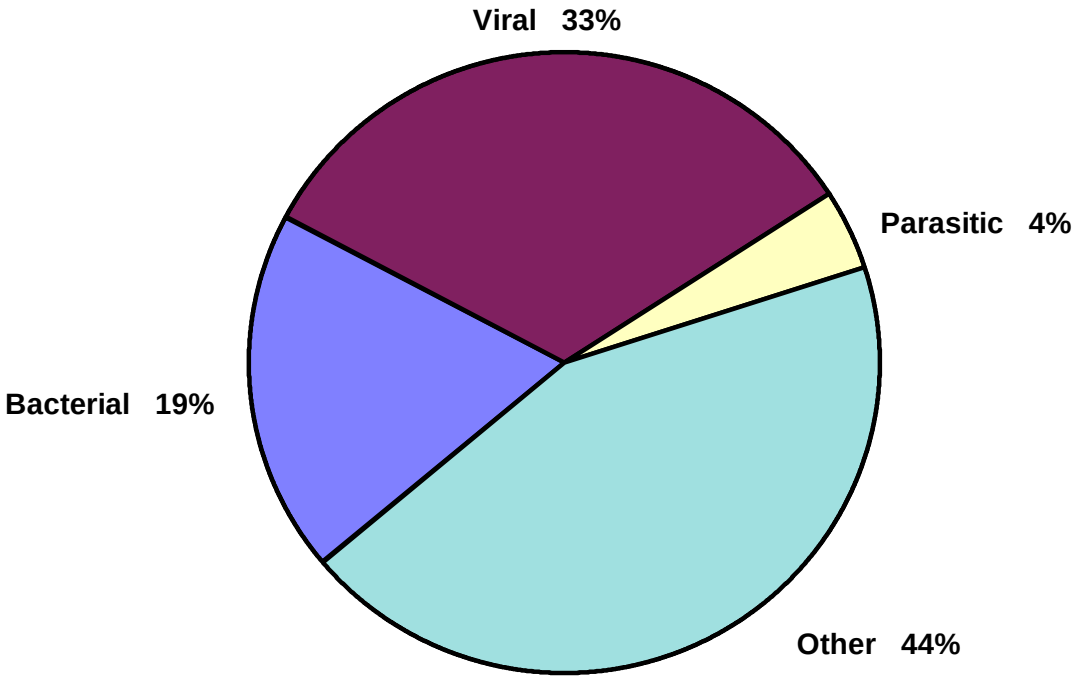
Disease/Establishment Number	Restaurant	Retail Store	Nursing Home	School	Caterer	Other	*Total*
Unspecified GI	212 (490)	38 (67)	1 (30)	3 (98)	5 (115)	19 (142)	***278 (942)***
Salmonellosis	36 (108)	5 (13)	1 (4)	3 (14)		5 (5)	***50 (144)***
Campylobacteriosis	32 (33)	2 (2)		2 (2)		2 (3)	***38 (40)***
Hepatitis A		2 (3)				1 (1)	***3 (4)***
Listeriosis		1 (2)					***1 (2)***
Giardiasis	3 (3)	1 (1)					***4 (4)***
Shigellosis	4 (6)						***4 (6)***
Yersimosis	1 (1)	1 (1)					***2 (2)***
C. perfringens				1 (155)			***1 (155)***
***E. coli* 0157:H7**	5 (7)	2 (2)	1 (1)			3 (49)	***11 (59)***
Viral gastroenteritisI			1 (13)		1 (691)		***2 (704)***
Cyclospora		2 (61)		1 (10)		1 (13)	***4 (84)***
HUS*	1 (1)					1 (1)	***2 (2)***
Other	4 (4)	2 (2)				5 (5)	***11 (11)***
Total	**298 (653)**	**56 (154)**	**4 (48)**	**10 (279)**	**6 (806)**	**37 (219)**	***411 (2159)***

***HUS: Hemolytic Uremic Syndrome**

Foodborne Illness Complaints Massachusetts: 1990-1996

Month/Year	1990	1991	1992	1993	1994	1995	*1996*
January	33	30	6	29	26	41	***30***
February	19	22	36	29	19	23	***33***
March	30	25	15	31	42	23	***32***
April	39	13	26	52	34	29	***28***
May	45	44	16	18	27	31	***25***
June	38	26	19	54	34	54	***31***
July	30	31	26	53	23	22	***61***
August	38	41	36	22	64	20	***40***
September	48	7	15	27	35	51	***42***
October	18	41	64	28	26	18	***50***
November	43	23	5	30	52	50	***27***
December	26	24	38	28	40	37	***42***
Total	**407**	**327**	**302**	**401**	**422**	**399**	**441**

Foodborne Illness Cases by Disease Category
Massachusetts: 1996



***HUS: Hemolytic Uremic Syndrome**

Disease categories			
Bacterial	**Viral**	**Parasitic**	**Other**
Salmonellosis	Hepatitis A	Giardiasis	Unspecified GI illness
Campylobacteriosis	Viral gastroenteritis (Norwalk or Norwalk-like)	Cyclospora	Burning sensation of mouth, etc.
E. coli O157:H7			
Listeriosis			
Shigellosis			
Yersiniosis			
Clostridium perfringens			
Hemolytic Uremic Syndrome			

Update on Seafood HACCP in New England

Linda Sperandio

The word is out that there is a deadline for training on the Seafood HACCP regulation. After completing two Train-the-Trainer courses in Maine and Rhode Island that trained approximately 60 trainers in August of 1996, the Seafood HACCP industry training has had a good beginning.

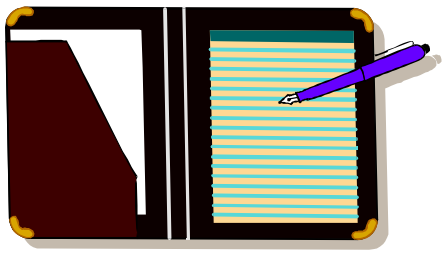
Maine is leading the way with a total of 8 courses completed, and 8 more planned to complete by July 1997. Locations in Maine have included Portland, Ellsworth, Deer Isle, and Machias. Willis Cobb from the federal Food and Drug Administration (FDA) has been coordinating this venture. One course has been completed in both New Hampshire and Vermont. More than 250 people representing about 200 seafood firms as well as State inspectors have been trained in Maine, New Hampshire and Vermont. Participants also included some Massachusetts and Canadian businesses. Both Nova Scotia and New Brunswick have began their own courses in Spring 1997.

In Massachusetts, more than 100 persons have been trained in Seafood HACCP through the American Food and Drugs Official (AFDO) Seafood Alliance course. Those trained represent 90 businesses. The three training sessions held in Massachusetts were located in Jamaica Plain (home of the Massachusetts division of Food and Drugs), Gloucester and North Dartmouth. Linda Sperandio from the Division of Food and Drugs coordinated the courses. Additional training courses are being planned as demand increases, and a waiting list has been established.

In Rhode Island, five courses have been completed, with Lori Pivarnik, of the University of Rhode Island, coordinator. Approximately 95 persons have been trained in the Rhode Island, including representatives from Massachusetts.

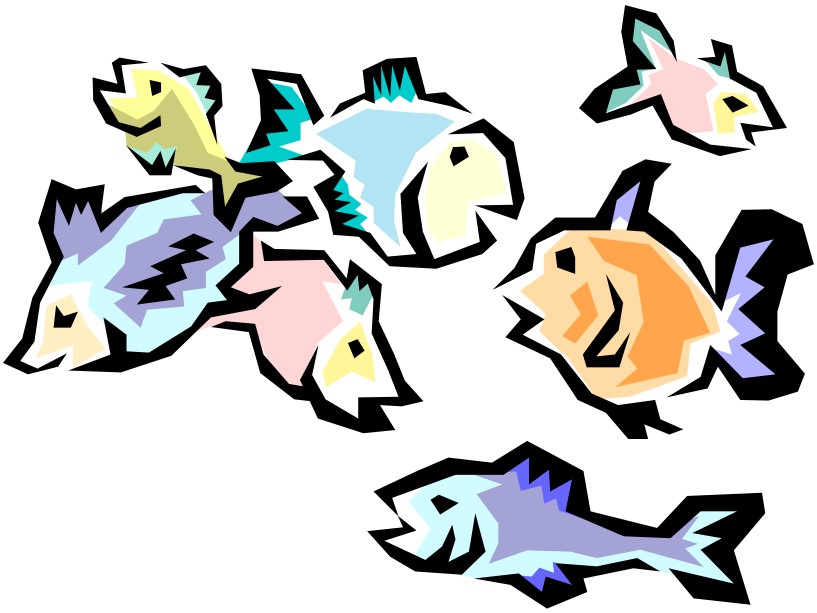
Connecticut has completed one State inspector course for 17 students and two courses enrolling a total of 90 industry participants. Nancy Balcom of the Connecticut Extension Services has been coordinating the program in Connecticut.

In Massachusetts, the courses have been well received and the majority of course evaluations have been returned with the comment good to excellent. One industry participant wrote: "I was terrified of HACCP and now feel so relieved that it is not going to be as bad as I thought."



Overall, the participants have had a positive outlook about the material being presented and demonstrated enthusiasm to improve their businesses and to comply with the regulation. Most seemed to particularly enjoy the content of the course, finding it useful as well as satisfying a need for knowledge and information on sources of foodborne illness. Students who were intimidated at first about being back in the classroom and learning about "the HACCP-stuff" left feeling comfortable with the new knowledge and resource materials.

The only consistent criticism of the program has been that many participants would prefer classroom models and examples that are related to shellfish to the specific foods they are processing. Also, many shellfish shippers would like to have examples that focus on receiving and shipping. The trainers expressed a similar criticism that they wish to have more choices of examples, especially when devising the workshop segments of the courses. A few requests have come to us from industry participants who enjoyed the experience so much that they would like to be a part of the Seafood HACCP trainings in the future and have offered their services to teach a segment of the course.



Question: Recently, the Division became aware of a handsanitizer which was being marketed as a replacement for handwashing. The manufacturer claims that the lotion can kill pathogens on hands for

In March 1997, the FDA, Office of Seafood, Seafood HACCP for Regulators offered "Seafood HACCP: Regulator Training Course" via satellite downlink. The workshop was provided at five downlink sites: Stoneham, Massachusetts; Augusta, Maine; Providence, Rhode Island; Storrs, Connecticut; and Rutland, Vermont. This was a mandatory course that included approximately 12 hours of lecture, course work, and a one hour exam. Regulators who attended the course and passed the exam received a certification for Seafood HACCP. A recorded makeup session was presented in April 1997 at the State Laboratory Institute in Jamaica Plain, Massachusetts for 15 persons who were unable to attend the March 26 session. ❖

Questions and Answers: Retail Food Establishments

Priscilla J. (Luongo) Neves, R.S. and Diane Bernazzani, R.S.

Question: What is the Department's current position on ceiling construction in warehouse-style retail food operations?

Answer: The Department is in the process of adopting provisions of the U.S. Food and Drug Administration (FDA) 1997 Food Code which will likely include those sections relative to ceiling construction. Sections 6-101.11(A)(3) and 6-201.18 of the FDA Food Code contain specific language which exempts such operations from having smooth and easily cleanable ceilings in areas where packaged food is displayed. Smooth and easily cleanable ceilings must be present in food preparation areas, walk-in refrigerators, warewashing areas, toilet rooms, mobile food establishments servicing areas and areas subject to flushing or spray cleaning methods. We also recommend that smooth and easily cleanable ceilings be located over unpackaged produce areas. The Division is unaware of any significant health hazards associated with such warehouse-style retail food establishments currently operating in Massachusetts.

FDA representatives on the national Conference for Food Protection Plan Review Committee reaffirmed the Food Code requirement and indicated that this was not a significant public health issue. They suggested the use of air curtains at loading docks to prevent the entry of birds. Also, air ducts, vents and any opening created during construction and maintenance should be kept covered to prevent the entry of pests and excessive dust. In reference to cleaning schedules, there is no recommendation since the quality of construction and environmental conditions could vary from facility to facility. The rafters and beams must be cleaned when there is dust accumulation.

up to four hours after application and that use of the lotion "eliminates" cross-contamination. Should such products be permitted as marketed?

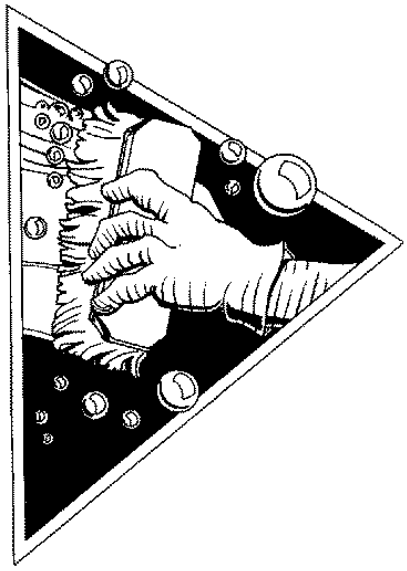
Answer: 105 CMR 590.000 does not recognize the use of hand sanitizers as a replacement to handwashing. Section 2-301.16 *Hand Sanitizers* of the 1997 U.S. Food and Drug Administration model Food Code also states that hand sanitizers, if used, shall be applied only to hands that have been properly washed.

Thorough handwashing is necessary after any activity in which the hands may become contaminated. If food workers believe that handwashing is not necessary for up to four hours after applying the lotion, they may feel safe in not washing their hands at times specified in Section .009, *Employee Cleanliness* of 105 CMR 590.000 *Minimum Sanitation Standards for Food Establishments - Article X* and in Section 2-301.14 *When to*

Wash of the 1997 Model Food Code. Depending on the extent of contamination, failure to wash hands properly, even when such lotion is applied, may result in the contamination of food, especially ready-to-eat food. The concept of "eliminating" cross contamination by use of such a lotion alone is misleading since

handwashing is an important step in reducing the microbial contamination on hands.

All ingredients in an antibacterial lotion must be classified as GRAS (Generally Regarded As Safe). There should be nothing in the literature provided that specifically indicates that such products be used in lieu of handwashing or that it "eliminates" cross contamination. Since salespersons may sometimes misinterpret the use of their own product, it is important to review instructions on labels and support literature provided by the manufacturer. Questions or concerns about specific products should be directed to the Division of Food and Drugs. ❖



Temporary Food Establishment Guidelines for Local Boards of Health

prepared by the Massachusetts Food Establishment Advisory Committee

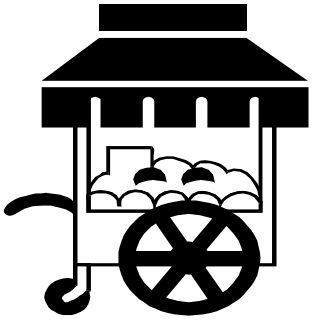
Introduction

A temporary food establishment is defined as a food establishment that operates at a fixed location for a period of time of not more than 14 consecutive days in conjunction with a single event or celebration. Temporary food establishments (TFE) are licensed and inspected by local boards of health (LBOH) in accordance with Massachusetts Regulation 105 CMR 590.000 *Minimum Sanitation Standards for Food Establishments-Article X.*

Temporary food events present special challenges to the Sanitarian. TFE may operate either indoors or outdoors and often have limited physical and sanitary facilities available. Certain organizations may presume they are exempt from LBOH regulations because of their non-profit status. Non-profit organizations are not exempt unless they distribute the food for free or at cost. Frequently, there are operators who want to run temporary establishments on a semi-permanent basis. LBOH should evaluate whether the operation would be defined as a temporary establishment under the current regulations, or whether the temporary establishment operator is using the definition to get around complying with full food service regulations. Roadside stands and farmers markets which sell only fresh produce, non-profit organizations (i.e., soup kitchens) which distribute food for free or at cost, and neighborhood bake sales are exempt from the regulations.

Food preparation in TFE operations can pose significant hazards due to limited physical facilities and equipment. The lack of proper storage and preparation space, inadequate refrigeration and hot-holding units, inadequate hand washing facilities and the lack of a hot/cold potable water supply are a few of the factors often identified in TFE operations which may contribute to cross-contamination, inadequate holding temperatures and the contamination of food by infected food handlers. Menus, physical facility and equipment design, food supply sources and food-handling procedures should be carefully reviewed with the operator prior to the issuance of a permit by the board of health.

Temporary food events such as traveling fairs and carnivals, multi-cultural celebrations, special interest fund raisers and restaurant food shows have become extremely popular within the last few years. Many of these TFE are high-risk food operations which must be carefully monitored by the LBOH. The information that follows is designed to facilitate the application approval process and to provide event coordinators and TFE operators with basic food safety requirements necessary to prevent a foodborne outbreak.



A. Monitoring Temporary Food Events in Your Community

1. Many events are scheduled on an annual basis. Keep a calendar of these events.
2. Be alert for flyers, banners, newspaper and radio announcements.
3. Contact your local visitor's association or Chamber of Commerce. These organizations maintain schedules of events.
4. Contact managers of fairgrounds, parks, and other locations where temporary events are often held.

B. Coordinating the Temporary Food Establishment Application Process

1. For scheduled and/or annual events, contact

he event coordinator and have them complete and return the Coordinator's Check List 30 (thirty) days prior to the event. (See page 32.) Be sure to get the indicated information under the following items:

- Item 2 (Expected number of patrons/day). This number is needed to determine the number of restroom facilities required at the event.

- Item 3 (Location) List the exact location. The purpose is to assess the location as regard to the availability of water, wastewater/solid waste facilities and services, dust control and the parcel size for the expected number of patrons.

- Item 4 (Name of Event Coordinator) Request a list of the names, telephone numbers, and addresses of the operators.

- Item 8 (Restroom Facilities) This includes the number and type of toilet and handwashing facilities to be provided.

  Toilets In the interest of public health, toilet facilities should be provided at gatherings lasting longer than 2-3 hours. Providing adequate toilets and handwash facilities would normally be the responsibility of the coordinator. Toilets may consist of properly designed and operated portable toilets.

  The requirement for toilets at outdoor temporary food events is not covered under Massachusetts Fuel Gas and Plumbing Code. LBOH should use the *Sanitarian and Health Official Guide* for determining the *Portable Restroom Requirements at Special Events and Crowd Gatherings* as published by the Center for Business and Industrial Studies, U. of Missouri, St. Louis, MO 63121. The peak crowd should be used to determine the number of toilets required.

  At least one lavatory (handwasing facility) per five toilets should be provided. Lavatories (hand washing facilities) should be installed within or adjacent to a toilet room if running water is practically available. If running water is not practically available, lavatories must be equipped with water for handwashing from an approved storage tank. Storage tanks used in remote or other locations where running water is not practical should:
  a) be clean,
  b) not previously used for the storage of wastewater or toxic substances,
  c) be of adequate capacity to provide .25 gallon per person for the peak crowd,
  d) be refilled at least daily,
  e) provide water at lavatories via gravity flow, and
  f) flow into a catchment, drywell or other receptacle approved for the event by the department.

- Item 9 (Electricity) This information will help the Sanitarian determine the type of food that can be safely prepared or served at the event.

- Item 10-12 (Water, Wastewater and Solid Waste). This information will help the Sanitarian determine if adequate facilities are provided on site or if additional supplies/services are needed.

2. Prepare packets which include:
   * Cover Letter
   * Temporary Food Service Permit Application
   * *Are You Ready?* check list
   * *Food Safety at Temporary Events* pamphlet

   Cover letters should include the deadline for receipt of the applications and a general schedule for pre-opening inspections.

3. Send the coordinator a number of packets which he/she will distribute to potential operators, or obtain a list of operators from the coordinator and mail each individual operator a

acket.

4. Fourteen days prior to the event, check the applications received against the list of operators from the coordinator. Call or send a reminder postcard or letter to operators for whom you have not received an application.

5. Inform the coordinator that reports of suspected or confirmed illness associated with the event must be immediately reported to the LBOH.

C. Reviewing Applications and Regulations with TFE Operators

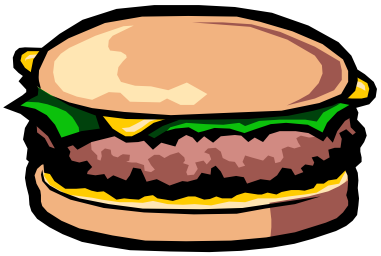
1. **Food Preparation and Plan Review:** Conduct a food preparation and plan review based on the menu and procedures identified on the Application for Temporary Food Service Permit. (see page 28.) It may be necessary to call or meet with the TFE operator to obtain complete information. Event coordinators often schedule meetings to review event policies and procedures with the concessionaires. This is an excellent opportunity for you to meet with the temporary food operators and review requirements, answer questions and assist them in completing the application. Also inform the event coordinators and the TFE operators that reports of suspected or confirmed illness associated with the event must be immediately reported to the LBOH.

- Item 2 (Menu) The operator should list all menu items including beverages, condiments, etc. The sanitarian may prohibit certain foods or procedures based on the availability of adequate physical and sanitary facilities. Menus should be kept simple.

- Item 3 (Agreement). The letter of agreement should include dates, times and foods to be prepared at the permitted or otherwise approved kitchen. A copy of the approved kitchen's food permit should also be attached if the establishment is in another city or town.

- Item 4 (Potentially Hazardous Foods and Other Foods which Will Support the Survival of Pathogenic Organisms). Insure that the operator has correctly identified all such foods listed in the menu and has accurately indicated all food-handling steps involving each item. Identify high risk foods which have been implicated in foodborne outbreaks (i.e., salads, sandwiches, ice, ground beef). Pay special attention to foods which will require several steps of preparation or handling prior to service and foods which are prepared 12 or more hours prior to service. Encourage TFE operators to prepare food as close to time of service as possible.

The Sanitarian may restrict foods prepared and served based on preparation and/or physical and sanitary facilities available. Meat, poultry, seafood and other PHF items may be approved if they simply require cooking and/or holding at the TFE site prior to service. If such PHFs and other foods such as salads which require extensive processing, i.e., thawing, cutting, mixing, and cooling prior to cooking or serving is necessary, these activities must be conducted in an approved kitchen such as a restaurant. Church or club kitchens which hold a food establishment permit issued by the board of health are also acceptable food preparation sites.



All food service establishments should be evaluated to determine if it has the space and equipment to safely accommodate the additional food preparation/storage/transportation that is proposed, before approving its use in conjunction with a temporary establishment.

Food Supply	Will all prepared foods be from an approved source? Will raw eggs, meat, seafood etc., be used in any ready-to-eat foods which does not require cooking? Will shellfish tags, which identify source and dealer be available for shellfish and retained for 90 days? Will shucked shellfish containers be labeled with the kind and quantity of shellfish, name, address and certificate number of the dealer and the lot number? Will meat and poultry be from a USDA-inspected source? Will any home-canned products be prohibited? How will all fresh produce (fruits and vegetables) be washed prior to use? Will the water/ice be from an approved source?
Infected Employees	Are foodhandlers aware that they will not be permitted to work if they have had vomiting or diarrhea within 48-72 hours of the event? Are foodhandlers aware that infected cuts and lesions must be well protected with a finger cot or disposable glove?
Cross-Contamination	Will ready-to-eat foods be adequately protected during storage from cross-contamination by raw animal foods? How will food-contact surfaces be cleaned and sanitized after preparing raw animal foods. Will separate utensils and containers be used for handling raw and cooked animal foods during the cooking process. Will food stored in ice be adequately protected from melting water? How will food be protected from environmental contaminants (i.e. dust, insects, birds) during preparation and holding prior to service?
Storage/ Cold-Holding	Will refrigeration units or coolers with ice/ice packs effectively hold PHFs at 45ºF or below for the duration of the event? Will ice used to store foods be properly drained? Will refrigeration units be equipped with thermometers?
Thawing	How will frozen foods be thawed, if necessary, prior to service?
Preparing	How will foodhandlers wash their hands? How will bare hand contact with ready-to-eat foods be minimized? How long will it take to prepare PHFs at ambient air temperatures? How will food temperatures be monitored?
Cooking	Does the TFE operator own a food-stem thermometer? To what temperatures will PHF be cooked?
Hot-Holding	How will hot PHFs be held at 140°F or above prior to service?
Cooling	How will PHF be cooled? How will leftovers be handled? Will salads with PHFs be made with pre-chilled ingredients?
Reheating	How will cooled PHFs be reheated? To what temperature will PHF be reheated?
Serving	How will bare hand contact with ready-to-eat foods be minimized?
Transporting	How will PHFs be held at 45°F and below or at 140°F and above during transportation?

hen reviewing food preparation procedures with the TFE operator, allow the operator to explain to you in his or her own words how each food item is handled from receiving to serving. Using the principles of Hazard Analysis Critical Control Point (HACCP), critical control points and monitoring procedures can be established for each food item. Issues which should be addressed to identify potential critical control points are listed in the table on page 21.

The Sanitarian should:

1. Identify the critical control points for each food item. There may be many control points. Critical control points are those few steps in a process that are most conducive to bacterial contamination, survival or growth. (i.e., handling of ready-to-eat food which do not require further cooking with bare hands). Significant contributing factors identified in foodborne illness outbreaks include:

- Anaerobic packaging
- Bare-hand contact
- Contaminated ingredients
- Cross-contamination
- Improper cooling
- Inadequate cooking
- Inadequate hot-holding
- Inadequate refrigeration
- Inadequate reheating
- Infected food handlers
- Natural toxins
- Poisonous chemical contamination
- poor dry-storage practices
- Preparation several hours before serving
- Toxic containers
- Unapproved food sources
- Unclean equipment

2. Correct any deficiencies at critical control points (i.e., rapid cooling of potentially hazardous food, preparing raw and ready-to-eat foods on separate work surfaces, prepare foods as close to service as possible) and insure that proper equipment and procedures are provided.

3. Identify how the critical control points for each operation will be monitored. Make note of these points on the back of the application form under Board of Health Comments.

4. Emphasize these monitoring points during subsequent inspections, with appropriate enforcement action when these critical steps are not being followed. Appropriate enforcement action could include voluntary destruction of food, or suspension of the permit where necessary.

*Item 5 (Food Sources) Meat and poultry sources must be USDA inspected. All foods must be from an approved source which is inspected by the appropriate regulatory agency. Shellfish tags must be available at the time of inspection and be retained by the TFE operator for 90 days.

*Item 5 (Water/Ice Supply) A potable water supply which complies with all applicable regulations is necessary for food preparation, drinking, handwashing and cleaning and sanitizing food contact surfaces. A municipal water source is preferred. Containers used to haul potable water must be food grade, used for no other purpose, and dispense water via a spout or capped opening.

Ice from an approved must be made from potable water and be in chipped, crushed or cubed form. Ice should be stored and dispensed in a way which protects it from contamination. Disposable gloves should be used when dispensing utensils have short handles.

**Item 5 (Wastewater) Wastewater must be disposed of in a public sewerage system or by a sewage disposal system constructed, maintained and operated according to applicable law. Holding tanks may be considered for wastewater disposal in remote locations.

*Item 6 (Plan Review Sketch) The operator needs to provide an adequate and complete to-

cale drawing of the establishment. "Same as last year" is not acceptable.

Storage Facilities: Food, equipment and utensils and single service items should be protected from environmental contaminants and stored off the ground on pallets or shelving. Only items necessary for the TFE operation should be stored in the TFE.

Dishwashing Facilities: For short term events (1-3 days), dishwashing equipment may not be needed provided that a.) the operator has a very limited menu requiring very few utensils and b.) enough utensils can be provided to replace soiled utensils or those used on a production basis. Utensils used on a production basis should be cleaned or replaced every 4 hours. Warewashing facilities must include a 3-compartment sink or 3 basins large enough for complete immersion of utensils and be supplied with adequate hot water to wash, rinse and sanitize. Disposable single-service utensils should always be used if adequate warewashing facilities are unavailable.

Floors/Walls/Ceilings/Openings: For short term events (1-3 days) at the discretion of the Sanitarian, a grass, woodchip or gravel floor surface may be acceptable if dust can be controlled and if food, utensils and equipment can be stored well above the ground on shelving or pallets. For repeated use of the booth or for booths used at events of long duration, floor/wall/ceilings must be durable and cleanable and all interior wood must be finished so it is non-absorbent and cleanable.
If food is being prepared, the TFE should have a ceiling and should be entirely enclosed. Walls may be constructed of plastic or screening. Windows should be screened to prevent the entry of insects. Screening material used for walls, doors or windows should be at least 16 mesh to the inch. Doors should be solid or screened and be self-closing. Walls and ceilings should be of tight and sound construction to protect from the entrance of the elements and, where necessary, crawling and flying insects. Counter service openings should be no larger than necessary for the serving of food and should be kept closed, except when in actual use. If food is pre-packaged or kept protected until served, full enclosure requirements may be waived by the Sanitarian.

Handwashing Facilities: TFE operations which prepare foods which are not pre-packaged must be equipped with a handwashing sink or alternative handwashing station. A large insulated urn (2 gallons minimum) full of warm water, a soap dispenser, a roll of paper towels and a bucket to collect waste water may be sufficient. TFE selling only pre-packaged foods or preparing only frankfurters may be exempt. The use of disposable gloves can provide an additional barrier to contamination, but gloves are no substitute for handwashing. Hand sanitizers may also be recommended in conjunction with handwashing.

Cooking/Reheating/Hot Holding Equipment: Equipment must be capable of holding foods at 140ºF or above. Sterno is not generally acceptable for hot holding except where used to maintain hot food temperatures during display for one to two hours. A certificate from the local fire department for open flames must be obtained for propane tanks and other open fires.

Lighting: Natural lighting is generally adequate for TFE set up outside. Booths should be designed to maximize natural lighting. For evening or indoor events, supplemental lighting may be necessary. Lighting over food preparation and service areas must be shatterproof or shielded from breakage.

Non-food Contact Surfaces: For newly constructed booths at events of short duration, clean wood or tarps are acceptable for floor/wall/ceiling construction. For repeated use of the booth or for booths used at events of long duration, floor/wall/ceilings must be durable and cleanable and all interior wood must be finished so it is non-absorbent and cleanable.

Refrigeration: At the discretion of the Sanitarian, potentially hazardous food may be stored in effectively insulated containers using a coolant to maintain temperatures below 45ºF at events of short duration. With all other foods and/or at events of long duration, mechanical refrigeration should be provided. All refrigeration units must have a numerically scaled thermometer to accurately measure the air temperature of the unit. Ice cream may be stored on dry ice.

A metal stem thermometer must be provided where necessary to check the internal temperatures of hot and cold foods. Thermometers must be accurate to ± 2°F.

Transportation Equipment: If cold or hot potentially hazardous foods will be transported, adequate hot or cold holding equipment may be necessary depending on the time in transit to ensure that they will be maintained at proper temperatures. All food must be kept covered and protected from contamination during transportation.

2. Notify operators of unapproved food supplies, improper food handling procedures or inadequate facilities as soon as possible. Request modified applications, if necessary. After review and completion of the application by both the applicant and LBOH, give or send a photocopy to the applicant.

D. Conducting Pre-Opening Inspections

Pre-opening inspections are critical at large events because:

* Many event coordinators require operators to be set up and operating when the gate opens. Some operators want to open before the event to serve set-up crews.

* It is impossible to inspect all the temporary food establishments prior to operation during the morning of the event.

* The pre-opening inspection insures that the proper permits have been obtained and that the required structure and equipment are present. This allows the operator sufficient time to correct any deficiencies without delaying opening of the establishment.

* Food handling and other operational aspects of the establishment can be emphasized during the routine inspection because structural items have already been addressed.

E. Conducting Inspections

1. During inspections, focus first on the monitoring procedures established on the application for the critical control points for that TFE operation. Observe the operation to identify potential sources of contamination and time/temperature abuse. Measure temperature of food in storage, after cooking and during cold/hot holding. Evaluate time/temperature violations to determine if food should be discarded or can be safely served.

Sources of Contamination:

Food Supply: Request to see sales receipts for food supplies. Request to see shellfish tags which must be retained by the TFE operator for 90 days. Check labeling on processed food products.

Food Handlers: Food handlers must not have any infected cuts or lesions, and must not have any disease transmittable by food. Food handlers with upper respiratory symptoms such as constant coughing or sneezing or food handlers with gastrointestinal symptoms such as cramps, vomiting and diarrhea must be restricted from handling food.

Closely observe food handling procedures and hygienic practices to ensure that bare hand

contact with ready-to-eat foods are minimized. Food handlers should be using utensils, single-service papers or disposable gloves whenever possible during preparation and service of ready-to-eat food. Disposable gloves are recommended in addition to using utensils or scoops.

Food handlers must have clean outer garments and hair restraints and restrain from eating and smoking in the TFE food preparation and service area. Persons who are not necessary in the TFE operation must not be in the food preparation and service area. Personal items should be stored in a designated area away from food preparation.

Cross-Contamination: Raw foods should be kept protected from ready-to-eat foods. Observe food handling practices to ensure that equipment and utensils used for raw PHFs are not used for cooked or ready to eat foods. Check sanitization procedures. Food handlers should wash their hands after handling raw PHFs.

Equipment/Utensils/Food Contact Surfaces: Food equipment must be food grade and easily cleanable. Check for availability and use of sanitizer. Wiping cloths must be rinsed frequently in a sanitizing solution (i.e., 100 ppm chlorine). Between uses, dispensing utensils may be stored in the food with the handle extended out of the food; clean and dry or in running potable water.

2. Specific TFE requirements are outlined in § 590.030 *Temporary Food Establishments*.

3. Violations noted must be recorded on an inspection report form and a copy provided for the operator.

4. Critical violations should be corrected before the Sanitarian leaves the TFE. If not possible, critical items should be corrected within 1 or 2 hours with the Sanitarian returning to confirm correction. Other violations must be corrected within a maximum of 24 hours. If violations are not corrected within the time specified, the LBOH may order the establishment to immediately cease food operations in accordance with Section 590.055 (A)(3)(d).

References

Massachusetts Department of Public Health, 105 CMR 590.000 - *Minimum Sanitation Standards for Food Establishments - Article X.*

Alaska Department of Environmental Conservation: Sanitarian's Guide to Temporary Food Service

Food Safety at Temporary Events, International Association of Milk, Food & Environmental Sanitarians, 200 W Merle Hay Center, 6200 Aurora Avenue, Des Moines, IA 50322.

Guzewich, J. et al, Use of Foodborne Disease Data for HACCP Risk Assessment, J. Food Prot., 57:820-83

Sanitation & Health Official Guide- Portable Restroom Requirements at Special Events & Crowd Gatherings, Center for Business and Industrial Studies, University of Missouri, St. Louis, MO 63121 ❖

Sample Cover Letter to Temporary Food Event Coordinators

Dear *Event Coordinator:*

The Board of Health has been informed that the *Name of Event to* be held on *Date(s)* in *City/Town* will include temporary food establishment operations. A temporary food establishment is defined as a food establishment that operates at a fixed location for a period of time of not more than 14 consecutive days in conjunction with a single event or celebration. Temporary food establishments are licensed and inspected by local boards of health in accordance with Massachusetts Regulation 105 CMR 590.000 *Minimum Sanitation Standards for Food Establishments -Article X.*

Enclosed is a Coordinator's Checklist which must be completed and returned to the Board of Health 30 days prior to the event. Please attach a list of names, telephone numbers and addresses of the temporary food establishment operators. You will be provided with a Temporary Food Establishment Packet for each food vendor which will include the enclosed Temporary Food Establishment Permit Application. The enclosed **Are You Ready** Check List and **Food Safety at Temporary Events** pamphlet which outline operational requirements and food safety information for temporary food establishment operators will also be included. To obtain a copy of 105 CMR 590.000, which contains specific provisions for temporary food operations, contact the State House Bookstore at 617-727-2834.

Please contact the Board of Health at *Telephone Number* if you have any questions or need assistance with completing the checklist.

Sincerely,

Board of Health

Sample Cover Letter to the TFE (Temporary Food Establishment) Operators

Dear *TFE Operator:*

The Board of Health has been informed that you intend to operate a temporary food establishment in *City/Town* at the *Name of Event* on *Date(s).* A temporary food establishment is defined as a food establishment that operates at a fixed location for a period of time of not more than 14 consecutive days in conjunction with a single event or celebration. Temporary food establishments are licensed and inspected by local boards of health in accordance with Massachusetts Regulation 105 CMR 590.000, *Minimum Sanitation Standards for Food Establishments - Article X.*

Enclosed is a Temporary Food Service Permit Application which must be completed and returned to the Board of Health two weeks prior to the event. A pre-operational inspection will be conducted on *Date* between the hours of *Time.* All equipment must be in working order. Failure to correct violations noted during the pre-operational and routine inspections may result in suspension of operations.

Also enclosed is a **Are You Ready** Check List and a **Food Safety at Temporary Events** pamphlet which outline operational requirements and food safety information for temporary food establishment operators. Please review these materials carefully and share them with anyone else who will be preparing and serving food with you. To obtain a copy of 105 CMR 590.000, which contains specific provisions, contact the Massachusetts State House Bookstore at 617-727-2834.

Please contact the Board of Health at *Telephone Number* if you have any questions or need assistance with completing the application.

Sincerely,

Board of Health

APPLICATION FOR TEMPORARY FOOD ESTABLISHMENT PERMIT

Name of Establishment | Operator Contact Telephone

Name of Event/Location

Operator Mailing Address

1. Before completing this application, read Food Safety at Temporary Events and the temporary food establishment "Are You Ready?" Checklist. Have you read these materials? __YES __ NO

2. **Menu**: Attach or list all items. Any changes must be submitted and approved by the Board of Health at least 5 days prior to the event._____

_____

3. Will all foods be prepared at the temporary food establishment booth?

____ **YES** Complete **SECTION A**.

____ **NO** 1. Attach a copy of the agreement with the licensed food establishment where food will be prepared. Include dates and times of food preparation and a copy of the permit.
2. Complete **SECTIONS A and B.**

4. List each food item prepared, and for each item check which preparation procedure will occur.

Food	Thaw	Cut/ Assemble	Cook	Cool	Cold Holding	Reheat	Hot Holding	Portion Package

SECTION A: At the booth

Food	Thaw	Cut/ Assemble	Cook	Cool	Cold Holding	Reheat	Hot Holding	Portion Package

Note: If your food preparation procedures do NOT fit the charts, attach an additonal sheet.

5. Food source(s): _____
Source and storage of water/ice:_____
Storage and disposal of wastewater: _____
Storage and disposal of trash: _____

6. On the back of this page, draw a sketch of the booth.

I certify that I am familiar with *105 CMR 590.000 Minimum Sanitation Standards for Food Establishments - Article X* , and the above described establishment will be operated and maintained in accordance with the regulations.

Applicant's Signature: _____Date: _____

SECTION A: At the approved kitchen:

1. Draw in the location and identify all equipment including handwash facilities, dish-wash facilities, ranges, refrigerators, worktables, food/single service storage, etc. (A certificate from the Fire Department is required for all open flames.)

2. Describe floor, wall and ceiling surfaces: _____
_____

Board of Health Comments:

Permit Number: _____Approved by: _____ Date: _____

Copy to Applicant: _____ In Person _____Mailed Date: _____

TEMPORARY FOOD ESTABLISHMENT OPERATIONS

ARE YOU READY ?

Use this guide as a checklist for plan review and preopening inspection.

□ APPLICATION A completed temporary food establishment application is to be submitted to the Local Board of Health a minimum of 14 days prior to the event.

Food and Utensil Storage and Handling

□ DRY STORAGE All food, equipment, utensils and single service shall be stored above the floor on pallets or shelving, and protected from contamination.

□ COLD STORAGE Refrigeration units shall be provided to keep potentially hazardous foods at 45°F or below. An effectively insulated container with sufficient coolant may be approved by the Sanitarian for storage of less hazardous foods, or for use at events of short duration.

□ HOT STORAGE Hot food storage units shall be used where necessary to keep potentially hazardous foods at 140° F. or above.

□ THERMOMETERS Each refrigeration unit shall have a numerically scaled thermometer to accurately measure the air temperature of the unit. A metal stem thermometer shall be provided where necessary to check the internal temperatures of both hot and cold food. Thermometers must be accurate to ±2°F, and have a minimum range of 40º-165° F.

□ WET STORAGE Wet storage of canned or bottled non-potentially hazardous beverages is acceptable when the water contains at least 10 ppm of available chlorine and the water is changed frequently to keep the water clean.

□ FOOD DISPLAY All food shall be protected from customer handling, coughing, or sneezing by wrapping, sneeze guards or other effective barriers.

□ FOOD PREPARATION All cooking and serving areas shall be protected from contamination. BBQ areas shall be roped off or otherwise segregated from the public.

Personnel

□ HANDWASHING A minimum five-gallon insulated container with a spigot, and a basin, soap and paper towels shall be provided for handwashing. The container shall be filled with hot water.

□ HEALTH Employees shall not have any open cuts or sores or diseases transmittable by food. Employees experiencing vomiting and/or diarrhea shall not have contact with food.

□ HYGIENE Employees shall have clean outer garments and hair restraints. Tobacco usage and eating are not permitted by food employees in the food preparation and service areas.

Cleaning

 WAREWASHING A minimum of three basins, large enough for complete immersion of utensil and a means to heat water are required to wash, rinse and sanitize food preparation equipment that will be used on a production basis.
 SANITIZING Chlorine bleach or other approved sanitizers shall be provided for sanitizing food contact surfaces, equipment and wiping cloths.
 WIPING CLOTHS Wiping cloths shall be rinsed frequently in a clean 100 ppm chlorine solution.

Water

 WATER SUPPLY An adequate supply of potable water shall be on site and obtained from an approved source. Water storage at the booth shall be in approved storage containers.
 WASTEWATER DISPOSAL Wastewater shall be disposed in an approved wastewater disposal system.

Premises

 FLOORS Unless otherwise approved, floors shall be constructed of tight wood, asphalt, or other cleanable material. Floors shall be finished so cleanable.
 WALLS & CEILINGS Walls and ceilings are to be of tight and sound construction to protect from the entrance of the elements and, where necessary, flying insects. Walls shall be finished so cleanable.
 LIGHTING Adequate lighting by natural or artificial means is to be provided. Bulbs shall be nonbreakable or shielded.
 COUNTERS/SHELVES All food preparation surfaces shall be smooth, easily cleanable, durable and free of seams and difficult to clean areas. All other surfaces shall be finished so cleanable.
 TRASH An adequate number of cleanable containers shall be provided inside and outside the booth.
 RESTROOMS An adequate number of approved toilet and handwashing facilities shall be provided at each event. These facilities shall be accessible for employee use.
 CLOTHING Personal clothing and belongings shall be stored at a designated place in the booth, away from food preparation, food service and warewashing areas .

Temporary Food Event Coordinator's Checklist

Return completed application to the Local Board of Health Office
30 (thirty) days before Event.

Please type or Print Legibly.

By providing the following information, you will assist in identifying potential public health problems that might occur during your event. Solving these problems in advance will provide the opportunity for a successful and smooth operation. You must notify the food booth participants that the Temporary Food Establishment Permit application must be received by the Board of Health no later than *2 (two) weeks prior to the Event* .

1. Name of Event_____ Date(s)_____

2. Expected Number of Patrons_____
   Expected Peak Days & Number of Patrons_____

3. Describe Event Location_____

4. Name of Event Coordinators/Responsible Individuals

	Name	**Address**	**Phone (Work and Home)**
a.			
b.			
c.			
d.			

5. Number of Anticipated Food Booths_____
6. Date, Time, Location of Scheduled Meeting with Food Booth Participants

	Date	**Time**	**Location**
a.			
b.			

7. Time of Event Set-up _____
8. Describe Proposed Restroom Facilities (Type, Number. Location)
_____
_____

9. Will Electricity be provided to the Food Booths? ____ Yes ____ No
10. Describe Potable Water Supply
_____
_____
11. Describe Wastewater Disposal System
_____
_____
12. Describe Garbage Disposal
_____
_____

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH
DIVISION OF FOOD AND DRUGS
305 SOUTH STREET
JAMAICA PLAIN, MA 02130 Tel. 617-983-6700 Fax: 617-983-6770

Food Establishment Operations during Temporary Water Supply Interruptiions

Operation	Acceptable Corrective Action
Handwashing by Employees/Patrons	Use a temporary supply of potable water. *Note: Handwashing stations must be set up to accommodate regular and effective handwashing by employees (cleaned and sanitized coffee urns can be filed with a temporary supply of potable water and placed on the edge of the sink to be used for handwashing).* Minimize direct handling of ready-to-eat food by using disposable gloves or papers, tongs and utensils.
Thawing of Frozen Foods	Thaw in the refrigerator. Never thaw frozen food under running tap water if the water is contaminated. Thaw in the microwave, followed immediately by thorough cooking usingconventional means, if there is no interruption of the cooking process.
Washing, Spraying, Dipping and Soaking of Produce	Obtain and use pre-washed, packaged produce. Use produce which has been washed prior to the emergency. Use frozen or canned produce. Use a temporary supply of potable water.
Preparing and Cooking Food, including Reconstituting Dried Food	Use food that was prepared prior to the water emergency. Discontinue service of prepared foods, such as jello, ice. Use prepared food from a source where the water is not contaminated. Prepare food using a temporary supply of potable water.
Ice-making	Shut off ice-maker and disconnect it from the water supply. Use packaged potable ice from a commercial source. Use ice prepared before water emergency*(Note: If the onset of contamination is not known, do not use the ice)* Do not use ice made on the premises for food service operations. Make ice from a temporary supply of potable water. To return ice-maker to service after emergency: • empty and drain ice-maker, • turn ice-maker on and let ice maker run through 2 production cycles, • shut off, empty, clean and sanitize ice maker, and • return ice-maker to normal operation,
Storing Dispensing Utensils in Dipper Wells	Store utensils in food with the handles out of the food.

Operation	Acceptable Corrective Action
Preparing Carbonated and Other Cold/Hot Beverages	Replace with commercially bottled or canned beverages. Use pre-mix type soda systems. Disconnect water line to post mix type carbonated beverage machines. *To return system to service after the emergency, re-connect water supply, drain and disinfect the lines, if necessary, run beverages through each dispensing outlet to flush the system, and sanitize the soda nozzles.* Disconnect water lines to beverage dispensers where water is directly added from the plumbing system. To return system to service after the emergency: • Reconnect the water supply • Drain and disinfect the lines, if necessary • Run the system to flush the lines. • Clean and sanitize the units. • Return the units to normal operation Prepare drink mixes with a temporary supply of potable water.
Cleaning and Sanitizing Tableware, Equipment and Surfaces	Use only single-service tableware and single-use kitchenware. Bring items to a kitchen which has a safe, potable water source for cleaning and sanitizing tableware, kitchenware, etc. Use water from a temporary supply of potable water. For water supplies with temporary levels of coliform, but otherwise potable: Use a hot-water sanitizing temperature dishwasher (Final Rinse 180°F) Use a chemical sanitizing dishwasher with 140°F water as a sanitizing agent (chlorine, iodine, quaternary ammonia) Use a 3-compartment sink set-up with a temporary supply of potable water of water and either 170°F hot water or an effective, approved sanitizingsolution in the third compartment as the final rinse. Sanitize kitchenware and utensils with boiling water.
Flushing of Employee and Patron Toilets	Contaminated (non-potable) water may be used for flushing toilets. *If water is not available for flushing toilets, waterless toilets (port-a- potties) must be made available and accessible for employees.* Handwashing stations must be set up to accommodate effectivehandwashing by employees and customers after using the toilet.*Note: Cleaned and sanitized coffee urns can be filled with a temporary supply of potable water and placed on the edge of the sinks to be used for handwashing.*
Cleaing Floors, Walls and Other Non-food Contact Surfaces	Wear disposable plastic gloves when handling non-potable (contaminated) water. Wash hands with a temporary supply of potable water prior to food service.

A **temporary supply of potable water** may include: a supply of containers of commercially-bottled drinking water, one or more closed portable water containers, an enclosed vehicular water tank, an on-premises water storage tank, or piping, tubing, or hoses connected to an adjacent approved source.

This information has been prepared by the Massachusetts Division of Food and Drugs' Food Protection Program, Department of Public Health based on information from the United States Food and Drug Administration, Connecticut Department of Public Health, Stamford Health Department and the New York State Health Department.

Policy on Frozen Desserts:
Regulation, Licensing, Testing and Enforcement
Alfred Scoglio

This memorandum provides the Division of Food and Drugs' policy on licensing and testing requirements for 105 CMR 561.000 *Frozen Desserts, Frozen Dessert Mixes and Ice Cream.*

I. Licensing Authority for Wholesale for Retail Frozen Dessert Manufacturers

The regulatory authority for inspection and licensing of frozen dessert establishments is stated in M.G.L. c.94, § 65G-U. The law states that frozen desserts manufacturers, *both retail and wholesale*, shall be licensed and inspected by local boards of health. Frozen desserts are further regulated in 105 CMR 561.000, *Frozen Desserts, Frozen Dessert Mixes and Ice Cream.* All wholesale or retail frozen dessert manufacturers require licensing by the local board of health.

A. Scope

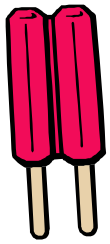
What type of establishments are considered frozen dessert manufacturers?

1. wholesale manufacturing plants that pasteurize raw milk and cream;
2. wholesale manufacturers who purchase a pasteurized mix and manufacture ice cream;
3. retail manufacturers* who purchase a pasteurized mix and manufacture ice cream, soft-serve ice cream or frozen yogurt in a "frozen dessert freezing/dispensing machine."

*It is important that the term *manufacturer* be understood as it pertains to frozen desserts. The term *manufacturer* or *frozen dessert manufacturer* as it appears in the regulations *includes any retail establishment operating a frozen dessert freezing/dispensing machine.* A "frozen dessert freezing/dispensing machine" is any machine that freezes, mixes and dispenses frozen desserts **This includes soft serve machines frequently operated at the retail level. This means that all frozen dessert manufacturers whether wholesale or retail, require licensing by the local board of health having jurisdiction.**

*What type of establishments are **not** considered frozen dessert manufacturers?*

1. Stores and restaurants that purchase ice cream in bulk and scoop it, but do not make ice cream in a frozen dessert freezing/ dispensing machine;
2. retail stores that purchase ice cream or other frozen desserts in pre-packaged retail containers for resale to the public;
3. vending machines that dispense packaged ice cream, novelties, etc.; and
4. "dispensing only machines." Dispensing only machines are machines which dispense a prepackaged ready-to-use frozen dessert. These machines do not mix or freeze a mixture. They merely dispense it. Therefore the machine is not considered a manufacturing machine.



B. Licensing of In-State and Out-of-State Frozen Dessert Establishments

M.G.L. c. 94, § 65G-U requires *wholesale and retail* in-state manufacturers of frozen desserts or frozen dessert mixes to be licensed and inspected by local boards of health. Application to local boards for licensing are to be made in February, and the license year is effective from March 1 through the end of February the following year. The Department of Public Health issues licenses for out-of-

state wholesale frozen dessert manufacturers only. Fees for licenses and permits may be determined by each municipality. Pursuant to M.G.L. c.94 § 65H the license application shall include the following:

1. a statement that the applicant will manufacture such products only from pure and wholesome ingredients and only under sanitary conditions;
2. the location of each plant where products will be manufacture;
3. a statement as to where applicant will purchase frozen dessert mix and/or where applicant will purchase raw milk products, if a pasteurization plant; and
4. the brand and trade name(s) under which products will be sold.

C. Establishments for the Pasteurization of Ice Cream Mix and/or Frozen Yogurt Mix

Pasteurization plants processing ice cream, ice cream mix and frozen yogurt mix are licensed by local boards of health and may be inspected by the Massachusetts Department of Public Health (DPH) or the local board of health. Whenever pasteurization is involved, the DPH, Division of Food and Drugs has traditionally performed the inspections because of the complexity of pasteurization systems. M.G.L. c. 94, § 65J allows for enforcement to be administered by either the local board of health or MDPH. Monthly testing of the ice cream or frozen dessert mix is also required by 105 CMR 561.009. If the manufacturer maintains its own state approved laboratory, it must keep monthly testing results on file and available to local and state inspectors. Otherwise, monthly samples of mix must be tested at a MDPH approved laboratory and copies of the results must be submitted to the Department and the local board of health upon completion of analysis by the testing laboratory.

II. Policy on the Current 105 CMR 561.000, Frozen Desserts, Frozen Dessert Mixes and Ice Cream

The MDPH, Division of Food and Drugs is issuing the following interpretations to the current frozen dessert regulation. This policy is applicable to local boards of health frozen dessert programs and can be implemented immediately until further notice.

A. Testing and Testing Exemptions

The current language in 105 CMR 561.009 states that all manufacturers must have their frozen dessert products tested monthly by an approved laboratory. Section 561.009 refers to five categories of frozen dessert products. These categories will be simplified or abolished in an anticipated regulatory revision. The intent is to require bacteriological testing for *dairy-based frozen desserts only.* Dairy-based frozen desserts such as ice cream, sherbet and frozen yogurt are frozen dessert products that contain dairy ingredients. *Non-dairy frozen desserts no longer require bacteriological testing.* Non-dairy frozen desserts, such as sorbet, water ices, Italian ice, slush and some frozen coffee beverages are frozen desserts that do not contain any dairy ingredients. These products do not pose the same potential for supporting pathogenic organisms as do frozen desserts that do contain dairy ingredients. **Therefore, testing of non-dairy frozen desserts is no longer required.** According to 105 CMR 561.009 all frozen dessert manufacturers (this includes soft serve dispensing machines and ice cream barrel freezers) shall have bacteriological tests performed on at least one dairy-based frozen dessert product per month by a DPH approved laboratory. The laboratory must submit copies of the results to the board of health and MDPH upon completion of the analysis.

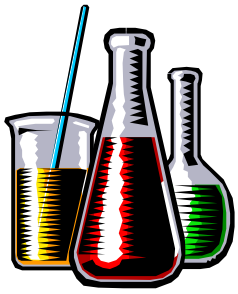
Note: Frozen yogurt is defined as a food which is prepared by freezing yogurt while stirring. Today, frozen yogurt is

actually a cultured frozen dessert mix blend. Frozen yogurts may or may not contain active yogurt cultures. Laboratories should not run the standard plate count (SPC) test on frozen yogurts containing these "friendly" culture bacteria. Some frozen yogurt may have been pasteurized after culture was added. If it is known that a product labeled "frozen yogurt" does *not* contain live cultures, then the SPC should be performed by the testing laboratory. The coliform test is *always* run on frozen yogurts.

B. Enforcement Procedures per 105 CMR 561.009

The bacteriological limits for frozen desserts set forth in 105 CMR 561.009 are 10 coliform colonies per gram and 50,000 standard plate count (SPC) per gram. It is the responsibility of local boards of health to enforce monthly testing and reporting requirements for frozen dessert establishments, as well as to take appropriate actions when bacteriological violations have been found.

The bacteriological standards are intended to provide guidance for enforcement and provide only one view of the total frozen dessert manufacturing environment. The standards were never intended to be used as a rigid enforcement tool, especially on the first analysis. *It should be noted that the frozen dessert regulations (current and proposed)* ***do not*** *consider one excessive count as a violation.* The presence of coliform is an indicator of inadequate operational sanitation and controls somewhere in the process. Bacteria counts slightly above the standards should only be a wake up call. It should alert the machine operator that something may not be right with cleaning, temperature, storage or handling. Intervention by the local boards of health at this point is often unnecessary.



In an effort to aid boards of health weighing the significance of bacteriological counts that have exceeded the standard, some commonly asked questions with MDPH's answers follow:

Q. If a frozen dessert sample is reported to have a 20 coliform count, is this considered twice as bad as a coliform count of 10?

A. The coliform count is an indicator of a possible sanitation failure, not a confirmation that pathogens are present. In terms of the way bacteria grow, a count of 20 coliform does exceed the standard by a significant margin. Bacteriological growth occurs at an exponential rate, not at a linear rate. Therefore, it is more meaningful to consider bacteria counts in terms of *doubling*. A two-generation increase, or two doublings, is considered significant. For example, a coliform count more than 40 would be considered significantly higher than a count of 10, the standard.

Q. Does a standard plate count (SPC) slightly above the standard of 50,000 colonies per gram present a public health concern?

A. The limit of 50,000 SPC is intended as a guideline. Usually the SPC represents harmless organisms, especially if there are no coliform associated with the sample. Spoilage organisms usually begin to affect the frozen dessert product in numbers much greater than 50,000. It usually takes counts of 1,000,000 or greater to create spoilage. According to 105 CMR 561.009, exceeding 50,000 once is not considered a violation. When a SPC is only slightly high, i.e., 150,000, consider the company's track record. A telephone call to the owner to insure standard operating procedures have been followed may be all that is necessary. If previous counts have been satisfactory, request that the person in charge review their machine cleaning and sanitization and product handling procedures, and then just wait for the next month's results. Following the same logic of a two-generation increase, it would take an SPC

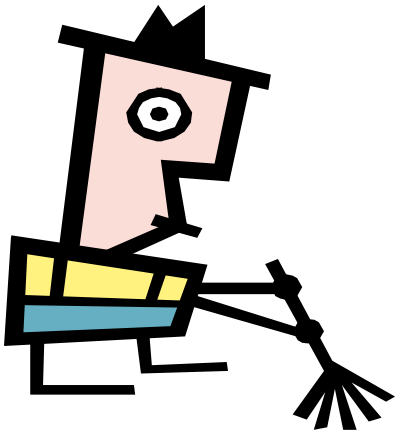
of 200,000 or above to be considered "significantly high," as compared with 50,000, the standard.

Q . Do frozen dessert samples showing excess coliform contain pathogens which could make people sick?
A. As stated earlier, the coliform count is an indicator that pathogens might be present. Further testing is necessary to confirm actual pathogens. The overall risk to frozen dessert products is extremely low. The cold temperature simply does not allow for the growth of pathogens. In fact, there are very few reported food-borne illnesses associated with frozen dessert products - none reported to MDPH in recent years. (The Schwann's Ice Cream case in 1995 was a very specific case involving tanker truck contamination of ice cream mix.)

Q. What if counts continue to be reported in excess of the standards?
A. If the frozen dessert establishment has a history of slightly high counts or has some significantly high counts, the board of health should implement the resampling protocol stipulated in 105 CMR 561.009, or perform an inspection, or both. In accordance with 105 CMR 561.009, when a laboratory result shows a frozen dessert product is in excess of the bacteriological standards, the local health inspector may obtain or require additional testing in triplicate and may conduct an inspection to determine the cleanliness of the machine and/or establishment. It is deemed a violation if the majority of the three samples exceed bacterial limits. At this time the inspector may take action against the dispensing machine(s) and/or establishment responsible for the high counts.

Q. When should local health officials take enforcement action for high bacteria counts?
A. Slightly high counts aside, there are times when local enforcement action is warranted and should be taken. An inspection of the establishment and/or triplicate sampling shall be conducted:
- if there are repeated excess counts on the same machine;
- if there are significantly high counts (A count is considered significantly high if it exceeds the standard by a factor of four, or two doublings.); or
- if there is a combination of both high SPC and high coliform.

Also, review the establishment's cleaning and sanitizing procedures and check against manufacturer's specifications for the machine in use. Remember, if triplicates have been collected and the majority of triplicate samples exceed the standard, the local board of health must order the responsible machine shut down for cleaning and sanitizing. Reinstatement of shutdown machines should depend upon the results of recent inspections, corrections made or promised by the establishment and the overall compliance history of the establishment.



Q. During an inspection prompted by high bacteria counts what questions should be asked?
A. Ask if and how disassembly, cleaning, sanitizing and assembly of frozen dessert machines are performed as indicated by manufacturers recommendation and at the required frequency. Also ask if the machine has been maintained properly. Often worn parts can lead to bacteria problems even when cleaning and sanitizing are completed properly. Review the establishment's cleaning and sanitizing procedures and check against manufacturer's cleaning protocols for the machine. As always, common sense and professional judgment should be employed.

III. Labeling and Nomenclature

In order to align with sections of the Nutri-

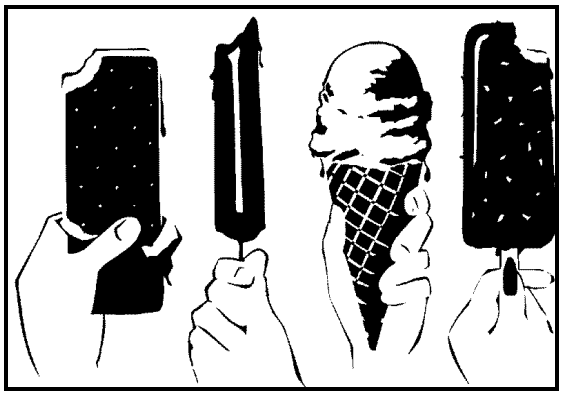
tional Education and Labeling Act of 1990 (NLEA) affecting frozen desserts which became effective last year, Massachusetts is required to eliminate any conflicting standards of identity. To that end the *ice milk standard* (formerly 105 CMR 561.113) has been eliminated. The terms "low-fat ice cream," "non-fat ice cream" and "fat-free ice cream" are now acceptable product identifications for ice cream products with reduced fat levels. Labeling compliance with 105 CMR 561.000 and 105 CMR 520.000 should be reviewed during inspections for any frozen dessert products that are pre-packaged for retail sale.

IV. Policy Questions and Upcoming Regulatory Revision

In addition to this new policy, the Massachusetts Division of Food and Drugs will soon be revising 105 CMR 561.000 *Frozen Desserts, Frozen Dessert Mixes and Ice Cream*. The regulatory revision will:

1. provide clear guidance for testing and enforcement procedures for frozen desserts;
2. eliminate conflicting language between federal and state regulations with regard to the labeling of reduced fat frozen desserts; and
3. reduce confusing and ambiguous language.

For questions or more information concerning this new frozen dessert policy, contact the Massachusetts Division of Food and Drugs at 617-983-6712. ❖



The Massachusetts Department of Public Health's Internet Homepage

Greg A. Tocco, Programs and Policy Coordinator
Bureau of Health Quality Management

(http://www.magnet.state.ma.us/dph)

The Internet is changing the way the world does business and disseminates information. The Department has embraced this revolution and is making a commitment to provide as much information and services on-line as possible. In the past year, the viewership on the Department's Homepage has increased from 313 to 3,333 viewers per month. This 10-fold increase indicates that the more information the Department offers on-line, the more the Internet is utilized as a method of attaining information and services.

The Division of Food and Drug, Food Protection Program has embraced this new mode of communications by providing the issues of **The Reporter** on-line. Additionally, there are information-packed fact sheets, timely advisories and press releases, and other information resources such as: "Residential Kitchens: Questions and Answers" and "Sanitary Operating Procedures for Massachusetts Cider Mills." Thus, Food Protection Program is able provide viewers with pertinent and important information in a timely and efficient manner.

The Department will continue to utilize the Internet as a means of disseminating timely and useful information. In addition, the Department plans to expand the Internet's role to the actual delivery of services. The result will be improvements in quality and efficiency for the end-user as well as cost and time savings for the Department. ❖

Mailing List Going Electronic

Most likely, you received this edition of **The Reporter** via the conventional method of the postal service. For the next edition of **The Reporter** I will also distribute copies by using the Internet. Therefore, I am assembling an e-mail list. To be added to this e-mail list, please send your address to:

joan.gancarski@state.ma.us

Unless indicated otherwise, by requesting to be added to the e-mail list, your name will deleted from the hard copy distribution list. ❖

Eating Defensively:
Food Safety Advice for Persons With AIDS

United States Food and Drugs Administration

Bacteria and Food Poisoning

"It must have been something I ate!" How many times do people say this following a bout of nausea, upset stomach, cramps, diarrhea, or vomiting?

Indeed, these can be the symptoms of food poisoning - illness caused by eating food on which harmful bacteria have grown. The bacteria that cause food poisoning are difficult to detect by a food's appearance, taste or smell. But they can cause illness ranging from mild to very severe and even life-threatening. The human body ordinarily is well-equipped to deal with these bacteria, but individuals with weakened immune systems - such as those with acquired immune deficiency syndrome (AIDS) and those infected with the human immunodefiency virus (HIV) - can be at a far greater risk of serious illness. Because of their weakened immune systems, these individuals are more susceptible to contracting a foodborne illness. Once contracted, these infection, with their severe vomiting and diarrhea, can be difficult to treat and they can come back again and again. This can further weaken the immune system, and hasten the progression of HIV infection and be fatal for persons with AIDS.

Since most foodborne illnesses result from improper handling of food, persons with AIDS or HIV infection can help themselves by following basic food safety guidelines. Applying these guidelines when buying, preparing and storing food, along with having a basic knowledge of the most common harmful bacteria and the foods on which they are found or can grow, can allow persons with AIDS to eat defensively while choosing a nutritious diet.

People cannot get AIDS from food. The food safety advice in this article is intended to help persons with HIV infection to reduce the risk of food poisoning, thereby avoiding an illness that could worsen their condition or even cause death. While many kinds of bacteria can cause food poisoning, three are the most prevalent threat to persons with AIDS and HIV infections. These are Campylobacter, Listeria and Salmonella.

The symptoms of Campylobacter infection (campylobacteriosis) include acute abdominal pain, diarrhea, (which can be watery and contain blood), nausea, headache, muscle pain, and fever. Symptoms can begin 2 to 5 days after eating contaminated food and generally lasts 7 to 10 days. Campylobacter bacteria are most commonly found in raw or undercooked poultry, unpasteurized milk, and non-chlorinated water.

Listeriosis, the disease caused by Listeria, is characterized by flu-like symptoms of chills, fever and headache, sometimes accompanied by nausea and vomiting. These early symptoms can appear 3 to 30 days after exposure and can be followed by bacteremia (a bloodstream infection), meningitis (an inflammation of the membranes covering the spinal cord and brain), or encephalitis (an inflammation of the membranes of the brain itself). Foods found to contain Listeria are unpasteurized milk and cheeses, raw or undercooked meat, poultry, and fish.

Salmonellosis is the illness that can develop from eating foods containing Salmonella bac-

teria. It is characterized by flu-like symptoms, possibly accompanied by nausea, vomiting, abdominal cramps, and diarrhea. Symptoms can develop 6 to 48 hours after exposure and last up to one week. Foods most often associated with salmonellosis include raw or undercooked meat, poultry, fish, and eggs.

Shopping for Food

For persons with AIDS, it is especially important to read food labels to select foods that pose the least risk of food poisoning. For example, all milk and cheese products should have the word "pasteurized" on the label. Products that contain raw or undercooked meat or dairy products should be avoided, as well as products with a "sell by" or "best used by" date that has passed.

It is a good idea to put packaged meat, meat or fish into a plastic bag before placing it in the shopping cart. This prevents drippings from coming in contact with other foods and thus reduces the risks of cross-contamination - bacteria from one food contaminating another food.

The sale of food products with damaged packaging, the unsafe displaying of products (such as cooked shrimp on the same bed of ice as raw seafood), workers with poor personal hygiene, and unsanitary store conditions can add to the risk of foodborne illness. Not only should consumers avoid purchasing food products sold under such conditions, but the conditions should be reported to local health authorities.

After shopping, get chilled and frozen foods into a refrigerator or freezer as soon as possible. Storing them in a warm car or office or even carrying them around for a couple of hours can raise the foods' temperature enough to allow bacteria to grow.

At Home

Most cases of food poisoning are caused by improper food handling or preparation in the home. Keeping shelves, counter tops, refrigerators, freezers, utensils, sponges, and towels clean is one of the best ways to prevent bacterial contamination of food at home. It is especially important to wash all utensils and your hands with soap and hot water after handling one food and before handling another. This helps prevent cross-contamination in which, for example bacteria in raw meat could be transferred to other foods, such as salads or vegetables. For the same reason, wooden cutting boards should not be used for cutting raw meat, poultry or fish. Plastic boards are easier to clean and sanitize. Fresh fruits and vegetables should be thoroughly washed with water and refrigerated to reduce spoilage. The temperature in a refrigerator should be maintained at or below 40°F, and food should be stored in covered containers.

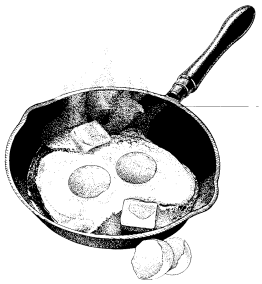
Properly cooking food is another important guard against food poisoning. Heat kills bacteria. Most cookbooks give appropriate cooking times and temperature for different foods. A meat thermometer should be used to ensure complete cooking. Cook red meat until well done, and poultry until the juices run clear. Thoroughly reheat leftovers (165°F).

Never eat raw eggs or foods that contain them. Pasteurized eggs should be used in place of shell eggs when making homemade ice cream, eggnog and mayonnaise. If you can't obtain pasteurized eggs, then you must omit the egg ingredient when making homemade ice cream. When cooking eggs, make sure that the

yolk and white are firm, not runny.

Here are cooking times and temperatures:

- Scrambled - 1 minute at medium stove top setting (250°F for electric frying pans).
- Sunny side - 7 minutes at medium setting (250°F) or cook covered 4 minutes at 250°F.
- Fried, over easy - 3 minutes at medium setting (250°F) on one side, then turn and fry for another minute on the other side.
- Poached - 5 minutes in boiling water.
- Boiled - 7 minutes in boiling water.
- Microwave cooking requires special precautions. Most microwave recipes include a "standing time" after the cooking period to ensure that a proper temperature is reached throughout the food. Also, many microwave dishes must be removed from the oven and stirred from time to time - again, ensuring thorough cooking. It is particularly important to heat pre-cooked foods or leftovers thoroughly, whether in a microwave or conventional oven.



Eating Out

Restaurants, like grocery stores, are required to follow sanitation guidelines established by state and local health departments to ensure cleanliness and good hygiene. Persons with AIDS need to avoid the same foods in restaurants that they would at home. Always order food well-done; if it is served medium to rare, send it back. A good way to determine doneness is to cut into the center of the steak, hamburger, or other piece of meat. If it is the least bit pink or bloody, it needs more cooking. Fish should be flaky, not rubbery, when cut.

Order fried eggs cooked on both sides instead of sunny side up, and avoid scrambled eggs that look runny. Caesar salad should be avoided since it contains raw eggs. If unsure about the ingredients in a particular dish, ask before ordering.

Raw seafood poses a serious risk of food poisoning for persons with AIDS. Raw shellfish, like raw meat and poultry, should be assumed to harbor harmful bacteria. Oysters on the half shell, raw clams, sushi and sashimi should not be eaten. Lightly steamed seafood, such as mussels and snails, should be avoided.

Traveling Abroad

Not all countries have the same high standards of hygiene and sanitation as the United States, so persons with AIDS should take additional precautions when traveling abroad.

Boil all water before drinking. Drink only beverages made with boiled water or canned or carbonated bottled drinks. Ice, too, should be made only from boiled water. Avoid uncooked vegetables and salads. All fruit should be peeled. Eat cooked foods while they are still hot.

A good rule of thumb is "Boil it, cook it, peel it, or forget it." While food poisoning can usually be treated with rest and plenty of fluids until solid food can be eaten again, persons with AIDS or HIV infection may experience prolonged and more serious symptoms requiring a doctor's care.

Conclusion

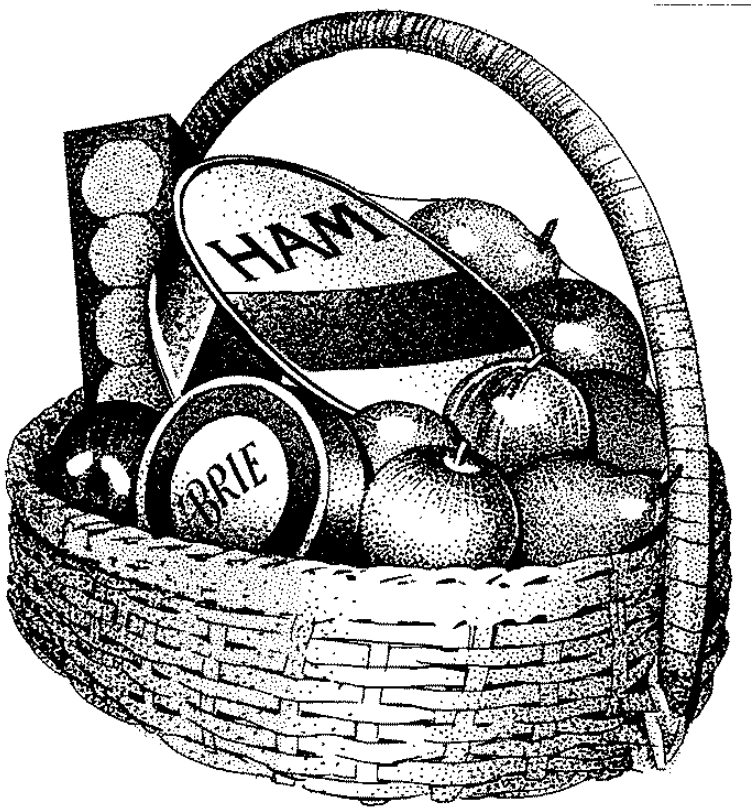
If a consumer or doctor believes that an attack of food poisoning was related to a particular food or restaurant, the local health department, Massachusetts Division of Food and Drugs (617-983-6712), or the Food and Drug

Administration should be contacted. Reporting the incident to health officials can help others avoid serious illness. The telephone number of FDA's Emergency Operations Branch is 301-443-1240 (This number is staffed 24 hours a day).

These food safety guidelines for persons with AIDS and HIV infection are no different than those recommended for anyone. But, in the case of persons with AIDS or HIV infection, contaminated food can have more serious consequences.

There are other high-risk groups - such as cancer patients, diabetics, transplant recipients, infants, pregnant women, and the elderly - who should also give special attention to those guidelines. For individuals in these high-risk groups, maintaining a nutritious diet is of great importance. Cooking and eating defensively need not interfere with a nutritious diet. But not being aware of the hazards and not taking appropriate steps to reduce the risk of food poisoning can be life-threatening.

1992, updated January 26, 1997 ❖



Massachusetts Housing Code

AMENDMENTS TO CHAPTER II, 105 CMR 410.000

Howard S. Wensley, M.S., C.H.O., Director
Division of Community Sanitation

By the time this appears in print, local boards of health and other housing code enforcement agencies should have received a copy of the amended Chapter II. The highlights of the amendments are as follows:

- In addition to the fixtures in shared bathrooms, the owner will be required to maintain the walls and floors in a clean and sanitary condition.
- The intensity of light in the common hallways is reduced from 3 foot candles to one foot candle. This change was necessitated in order to conform to the requirements of the state building code.
- Locking devices must comply with the requirements of the building code to avoid entrapment within a building.

All means of egress doors shall be readily openable from the side from which egress is to be made without the key or use of a key or special knowledge or effort. Key operation is permitted from a ***dwelling unit*** provided that the key cannot be removed from the door when the door is locked from the side from which egress is to be made.

Means of egress from individual ***dwelling units and rooming units*** of dwellings having an occupancy load of ten or less shall be permitted to be equipped with a night latch, dead bolt or security chain, provided that such devices are openable from the inside without the use of a key or tool and are mounted at a height not to exceed 48 inches above the floor.

- A means of egress is a continuous and unobstructed path of travel from any point in a dwelling to an abutting public way.
- Every dwelling must be identified with a number identifying the address of the building. This number must be affixed to the exterior of the building so that it is readily visible from the nearest street providing vehicular access to the building.
- The regulations concerning handrails and guardrails was amended in order to reflect the regulations within the building code. The height of guardrails is now related to the dates of construction or renovation as well as the use of the building. The applicable use groups, R-3 and R-4 are defined.
- The inspection report forms used in the connection with housing inspections must contain specific information as required by statute and regulation. Boards of Health will no longer be required to have their inspection report forms approved by the Massachusetts Department of Public Health (DPH).

The DPH in conjunction with the Massachusetts Health Officers and Environmental Health As-

sociations developing a protocol inspection report form. It is presently being field tested. At such time as the form is finalized it will be distributed.

- In those instances where a dwelling has an independent means of egress, not shared with other occupants and a written letting agreement so states, the occupant is responsible for maintaining free of snow and ice, the means of egress under his or her exclusive control.
- At the conclusion of every inspection, the inspector is required to provide an exit report to the occupant of the dwelling unit. This report may be either verbal or written. It is required, however, that there be a written report at the conclusion of the inspection if the occupant so requests.
- A board of health may grant a variance from the guardrail provisions in those cases involving historic buildings if it determines that the public health will not be compromised. In making a determination as to potential public health thought should be given as to the occupancy of the dwelling and does it contain children.

A historic building is one which has been individually listed on the National Register of Historic Buildings, any building evaluated by the Massachusetts Historic Commission (MHC) to be a contributing building within a National Register or State Register District, or any building which has been certified by MHC to meet eligibility requirements for individual listing on the National Register of Historic Places.

Under discussion and evaluation for future inclusion into the housing code is the issue of energy cost allocation systems. These systems provide a means to apportion approximate energy consumption to individual dwelling units in a multiple occupancy dwelling, based on one or more parameters which are controlled by the tenant. The Boston Housing Court has determined that these systems are not allowed under Chapter II unless a variance is provided.

Studies that have been reviewed thus far indicate that consumption of energy generally decreases by 20% when these systems are utilized and the tenant is responsible for the costs. It also appears that the overall housing costs decrease. ❖

The First Food Regulation

When dried or fresh meat cause men to become ill, all the left-over portions should be speedily burned. The violator will be flogged 90 strokes.

He who deliberately gives or sells it to another will be banished for a year, and if the person to whom it has been given or sold dies, the offender will be hanged.

T'ang Dynasty, China, A.D. 600